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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/396,266 09/15/99 PETERSON

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IM52/0312
UNIVATION TECHNOLOGIES L L C
5555 SAN FELIPE SUITE 1950
HOUSTON TX 77056

EXAMINER

LU, C

ART UNIT

PAPER NUMBER

1713

DATE MAILED:

03/12/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary

Application No.

09/396,266

Applicant(s)

Peterson

Examiner

C. Caixia Lu

Group Art Unit

1713

☒ Responsive to communication(s) filed on Dec 4, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-32, 1-32, 5-28, and 22-32 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-32, 1-3, 5-28, and 22-32 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Election/Restriction

1. Applicant's election of species in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

The disclosure is objected to because of the following informalities: Y defined as "a substituted group 13-17 heteroatom group" on page 9 between lines 16-17 does not make sense.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

- 11-8-01
2. ^{1-3, 5-20, and 22-32} Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 13, 30 and 18

According to the specification, J seems to define a divalent group and Y a monovalent group; however, when as a Group 15 atom, J will be trivalent and have one extra bond after bonding with Y, when as a group 17 atom, J will be monovalent and not have any free bond to bond with Y. In both cases, the catalyst precursor formula will be incorrect.

Claims 9 and 26

According to the specification, Y seems to be a monovalent group; however, when Y is defined as Groups 13-16 heteroatom, there will be extra bond(s) on Y after bonding with J, thus, the catalyst precursor formula will be incorrect.

Claims 5 and 22

The terms "indene" and "fluorene" lack antecedent basis.

Claim Rejections - 35 USC § 103

11-08-01 1-3, 5-20, and 22-32
3. Claims ~~1-32~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsui et al. (US 5,700,750) and Campbell, Jr. (US 5,206,197) for the same rationale as set forth in the previous office action, Paper No. 5.

Response to Arguments

4. Applicant's arguments filed on Dec 4, 2000 have been fully considered but they are not persuasive.

(i) The rejections of claims 5 and 22 for the terms "indene" and "fluorene" lacking antecedences are maintained. Indenyl and indene or fluorenyl and fluorene are different, one is a monovalent group and the other is a neutral compound. Therefore, indenyl and fluorenyl can not be the antecedences for indene and fluorene respectively.

(ii) Response to the argument that the examiner has not provided the necessary motivation using Tsutsui's teaching to go from a bis(cyclopentadienyl) to the mono(cyclopentadienyl) catalyst. The examiner does not dispute that the preferred metallocene compounds of Tsutsui are

bis(cyclopentadienyl) compound, but Tsutsui does not teach only bis(cyclopentadienyl) compound. As pointed out in the previous office action, Paper no. 5, Tsutsui does generically teach the mono(cyclopentadienyl) compound, therefore, it would have been obvious to a skilled artisan to arrive at the instant invention by use a mono(cyclopentadienyl) compound containing catalyst and expected it to work. Applicants need to show the criticality and unexpected result between Tsutsui's bis(cyclopentadienyl) compound containing catalyst system and applicants' mono(cyclopentadienyl) compound containing catalyst system.

(iii) Response to the argument that no evidence of obviousness other than conclusory statements in the rejection over Campbell. Contrary to styrene and alpha-olefins polymerized by completely different mechanisms, they both are polymerized by coordination-insertion of an alkenyl group. It is well known in the art that the styrene is not as reactive toward a metallocene catalyst as olefin due to the electronic and steric effect of the phenyl group in the styrene. Therefore, a catalyst is reactive toward styrene polymerization is expected more reactive towards olefin polymerization, however, a catalyst is reactive toward olefin polymerization may not reactive enough towards styrene polymerization. Thus, a skilled artisan will be motivated to use Campbell's monocyclopentadienyl compound containing catalyst system in search for a more reactive catalyst system towards olefins.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu (Ph. D.) whose telephone number is (703) 306-3434. The examiner can normally be reached from 9:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are:


(703) 305-5408 (official)

(703) 305-3599 (official after final)

(703) 305-5885 (unofficial).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

CL
March 8, 2000


DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700